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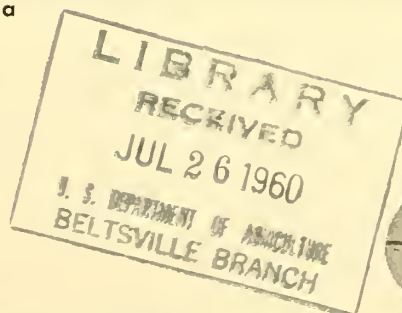
FOREIGN

DECEMBER
1959

AGRICULTURE



Milk delivered from model dairy, India



Farm Export Outlook
Milk Mission to Far East
Soviet Grain Exports

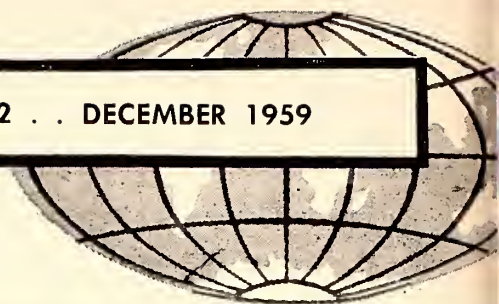
UNITED STATES DEPARTMENT OF AGRICULTURE • FOREIGN AGRICULTURAL SERVICE

FOREIGN

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To report and interpret world
agricultural developments.



New Opportunities Through Freer Trade

In this issue's article on "Problems of Agricultural Trade," Assistant Secretary of Agriculture Clarence L. Miller makes the point that "it is frustrating to have a good product in plentiful supply, offered at a competitive price, only to find it excluded from a (foreign) market by reason of import quotas or other restrictions."

Trade barriers, once established, tend to be perpetuated. That is why the United States, as part of its foreign policy, is making a strong and determined appeal to prosperous nations to wipe out those restrictions that originally were set up to protect balance of payments during early postwar exchange shortages.

The ability of a foreign country to buy from the United States is indicated by its foreign exchange earnings and its gold and dollar holdings. In fiscal year 1959, these rose to record levels.

Gratifyingly, much progress toward trade liberalization is being made. From January 1958 to September 1959, at least 22 of the more important trading partners of the United States relaxed one or more import restrictions against U.S. farm products. However, as Assistant Secretary Miller has said, we must make substantial further progress in erasing these restrictions in order to permit our agriculture to share fully in the world's improved trade possibilities.

Cover Photograph

Bombay citizens wait at city distribution center for milk to be unloaded from government's model dairy colony at Aarey. Colony consists of 30 self-contained farm units operating under modern hygienic conditions. Photo courtesy FAO. (See milk story on page 8.)

In This Issue

	Page
Our Farm Export Problems	3
Sudan Attempts To Shift From a One-Crop Economy....	5
Progress in Philippine Cotton Textile Industry	7
Milk Mission Visits the Far East	8
Greece's First Five-Year Plan Highlights Agricultural Goals	11
Controlling Insects With Their Natural Enemies	12
The International Age in Agriculture	14
Soviet Grain Export Outlook	15
Trade Prospects for Fresh Citrus	17
Food Frontiersman in Modern Rome	19
Hand Sheller Transforms Nigeria's Peanut Industry....	21
Foreign Production News	22
Trading Post	23

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OUR FARM EXPORT

PROBLEMS

By Clarence L. Miller, Assistant Secretary of Agriculture
For Marketing and Foreign Agriculture

The subject assigned to me is "Problems Affecting Agricultural Trade." I find five specific problems that agricultural people have to cope with as they participate in world marketing, but before I discuss them I want to mention one general overriding problem, one that is largely psychological. It is the fact that American agriculture, by and large, is not export-minded. We need to recognize this fact because it has much bearing on how we try to meet the five export problems.

There are some reasons why we as a nation are not especially export-minded. The main one is that nine-tenths of our farm production stays at home, feeding and clothing our own people. Our big emphasis is on servicing our big, remunerative, and stable home market. We tend to look on the foreign market—which takes one-tenth of our farm production—as a disposal outlet.

There are exceptions to this general statement, and to some extent these include our tobacco, cotton, and fruit industries, each of which has been active in world marketing for many years. Outside of these industries and some times within them, there is not always a full recognition of the importance of foreign consumers. Yet the actual im-

portance of the foreign market is apparent in the export statistics. For some commodities, it is not one-tenth but a substantial part of our production that is exported. Based on the last 3-year average, our exports are the equivalent of about half of our cotton and rice crops, two-fifths of our wheat and tallow production, and about one-third of our tobacco and soybeans (including the bean equivalent of soybean oil.)

In contrast to our own approach, we find countries like Denmark, which exports two-thirds of its food production and has built large parts of its agriculture to specifically service foreign markets. Many of our competitors are similarly export-minded—Canada with its wheat, New Zealand with its dairy products, South Africa and Israel with their citrus, and others that we could name.

These facts are mentioned not in criticism but as something to be recognized as we face up to our broad problems of exporting. Foreign competition is increasing. Foreign customers are becoming more demanding. So if American agriculture is to retain and expand its foreign markets, it will need to give the foreign buyers a quality of service equal to that traditionally given to buyers here at home.

Now to get down to the five basic problems. I have listed them as (1) availability of product, (2) price, (3) means to buy, (4) quality, and (5)

trade restrictions. All of these are interrelated, all need to be tackled together.

Availability of Product

It is a truism, of course, that the first problem in exporting is to have something to export. We are generally fortunate in this regard. In a broad sense, we have little supply problem for those commodities that we export in greatest volume—grains, cotton, tobacco, fats and oils, citrus, and such. The supply problem is most frequent for some of the commodities that we export in limited volume, and the one that currently comes to mind is dairy products. In recent years, we have been in and out of the dairy market and, at the moment, there is little butter, cheese, or nonfat dry milk available for export. If we intend to build a solid market overseas for our dairy products, continuity of supply is something that we need to consider seriously.

Ample supplies are a good thing to have; however, when foreign producers have them, it means competition. The United States exports 15 principal kinds of farm commodities; foreign producers have been expanding their production of them even more rapidly than we have. Some dips show up occasionally in the foreign production curve, mainly because of weather, and when they do there's more opportunity for our own supplies to move out. A current example is the expected increased demand for livestock feeds in Europe on account of drought damage

This article is adapted from Mr. Miller's talk at the 37th Annual National Outlook Conference, November 16, 1959, U.S. Department of Agriculture, Washington, D. C.

to pasture and fodder crops. But by and large, the world agricultural supply situation is greatly expanded, and we face real competition in today's buyers' markets.

Price

Another obvious requirement in world trade is to be competitive in price. This doesn't signify cutting prices under those of the other fellow; the main problem is to price our products so as to be on equal footing. We have a long list of commodities that we sell in the world market in which our price is fully competitive. With others, because of price support programs, our domestic prices are above world prices and we are able to meet world prices only through export subsidy payments. Currently, we are paying 8 cents a pound on cotton and an average of 50 to 60 cents on all wheat exported.

Export subsidies, however, are not the preferred answer to meeting competition. We are in the strongest position when our industry competes on a basis of efficiency. As a matter of fact, over three-fifths of our dollar exports of farm products are moving without any subsidy.

Means to Buy

Another rather obvious fact is that you can't sell to a foreign consumer unless he has the means to buy. Our best foreign customers are in the countries that are in the best foreign exchange position—and these are mainly the industrialized countries of Western Europe, the U.K., Canada, and Japan. The gold and dollar position of these countries has improved so markedly in recent years that, for the greater part, their currencies have become freely convertible, and reasons for discriminating against our agricultural products for balance of payments have largely disappeared.

What's good for the industrialized countries also can be good for the less developed ones. What's being done under Public Law 480 to help countries develop their economies, and similar assistance under the Food for Peace concept, with other developed countries sharing the load, add up to helping the less developed areas become better cash customers. But wheth-

er we are dealing with the developed or the underdeveloped countries, it's axiomatic that we have to buy foreign products if we expect other countries to buy from us.

This is the way that foreign customers acquire the dollars that they are using to buy our products. In this regard, our agricultural imports are important dollar earners for our foreign customers. Next to the United Kingdom, we are the world's largest importer of agricultural products.

Quality

Another problem we must meet in world trade is quality. At some time or other, we have all heard criticism that some of our exported farm products do not measure up in this respect. When you do a \$4-billion export business, some criticism of some part of your exports is inevitable. Every exporting country encounters it.

Probably the main cause for criticism of our exported farm products arises from misunderstanding of U.S. selling practices and contract specifications. It is oversimplification to criticize a shipment because it happens to be low quality; we export a wide range of quality, based on demand for that range, just as we consume a wide range of quality in the home market. The important thing is to make sure that the foreign buyer understands clearly what he is buying and orders what he actually wants.

In some cases, what is needed is more education of foreign buyers. A good start has been made by some of the agricultural trade groups which have brought foreign buyers to this country so they can become better informed on our production and marketing methods. We also need to exert more effort to meet special requirements. Then there is the problem of sanitary and foreign health requirements. The British don't let our live or uncooked poultry come in because of Newcastle disease. Fruit is another example. Our exports are sometimes limited because of delayed recognition and acceptance in some importing countries of various pesticides and preservatives that we use in modern production and marketing of fruit.

When problems of quality arise, the best approach is to bring them out in

the open and try to resolve them mutually. A recent example of this involves our lard exports to Germany. Our lard did not meet German import standards, but after German veterinarians had come here to inspect our processing methods, we were able to arrive at a mutually satisfactory agreement.

Trade Restrictions

Trade restrictions are among the most difficult of problems that we encounter. It is frustrating to have a good product in plentiful supply, offered at a competitive price, only to find it excluded from a market by reason of import quotas or other restrictions. The removal of trade restrictions against U.S. products is today one of our government's major policy issues.

Trade restrictions have been with us for a long time and exist for a number of reasons. Many countries are trying to be more self-sufficient in agricultural products. They may limit or exclude imports for reasons of defense, or to save dollars, or to favor home producers, regardless of whether or not the home production is economic. Secondly, and probably just as important, many countries practice bilateralism—a "you buy from me and I'll buy from you" proposition that excludes other traders.

The biggest trade liberalization effort today is directed primarily at removing those lingering restrictions that are holdovers from the days of dollar shortage after the war. During the past year, 29 countries of Western Europe and the sterling and French franc areas were able to make their currencies convertible to nonresidents. But unfortunately, convertibility and plentiful purchasing power do not in themselves guarantee the removal of trade barriers. That is why the United States is pressing for the liberalizing action that we know many countries are capable of taking.

I do not mean to minimize the progress already made. But some restrictions remain that cannot be justified on grounds of dollar shortages. Many of them are directed specifically against our products. We must make further progress with these to help our agriculture win a full share of the improved opportunities for world trade.

Sudanese pulls wad of gum arabic from the bough of an acacia tree. This gum, used round the world for adhesives and binding, among other things, is the country's second largest foreign exchange earner.



N.G.O. Khartoum

Sudan Attempts To Shift From a One-Crop Economy

By Cline J. Warren
Africa and Middle East Analysis Branch
Foreign Agricultural Service

After 2 years of serious financial troubles, the Sudanese Government has intensified efforts to find new ways to improve and vary its agriculture. The need for diversification has been accentuated by weakened world prices for long staple cotton—Sudan's chief export product. Cotton prices have been trending downward since the Korean conflict in 1950-51, but a marked decline since early 1957 has applied the greatest pressure to the Sudanese economy. Foreign exchange earnings have fallen off and the balance of payments position has deteriorated. As a result, imports have been restricted and some development projects curbed.

These difficulties have made the country's leaders increasingly aware of the danger of an economy based on a single commodity and have spurred them to promote industry and revamp agriculture. They plan to grow a number of crops, which they now get through imports. These include sugar, tea, coffee, cacao, wheat, and rice. At the same time, they are encouraging increased output of castor beans, chillies, sesame, peanuts, sorghum, fruits, and vegetables for export as well as for subsistence.

Planners are concerned with ways



Livestock contributes importantly to Sudan's economy and planners are concentrating on developing and improving the quality of native herds, such as these.

to develop and improve the livestock industry. Livestock is usually exceeded only by cotton and gum arabic as an exchange earner, and planners are emphasizing improvements to attract importing countries. To facilitate improvements, the government has established a Ministry of Animal Resources ranking equally with the other members of the Council of Ministers. While livestock numbers have increased sharply in recent years, authoritative opinions differ regarding the

exact magnitude of the industry. Regardless of current livestock population, Sudanese officials know that the industry can make a far greater contribution to the country's economy than is now being realized.

Gum arabic is another Sudanese product not being exploited to its full export potential. Gum arabic—the exudation from various species of acacia trees—has many uses, including the production of adhesives, thickening inks, binding, thickening latex,

and production of pharmaceuticals. Officials realize that, to get higher prices in the export market, the quality of the gum should be improved, and they are urging more care in methods of collecting and marketing it. The acacia trees grow wild and, at present, gum is collected if economic incentives are strong. Hence the size of the crop and quality of the product depend on individual effort and diligence.

New Crops

Sudan's agricultural face-lifting includes growing additional crops and large-scale experiments are already under way. The first sizable planting of castor beans—5,200 acres in the rich delta land near the Ethiopian border—is scheduled for the 1959-60 season. In addition, planners are considering a project to build a research station designed to develop and promote castor beans for export. West Germany will probably provide equipment and technicians for the project. Another 5,200 acres—in the Gezira, one of Sudan's largest irrigated areas—is being planted to wheat. Normally the Gezira is devoted principally to cotton in rotation with sorghum and lubia (a forage legume). Small quantities of wheat are usually grown along the banks of the Nile in the north, but most of the country's wheat flour is supplied through imports. Imports totaled 72,300 metric tons in 1957, but larger purchases will be needed in the future unless there is a substantial expansion in domestic output.

Coffee is believed to be a highly promising cash crop. Experimental farms and nurseries have been established to encourage production, and selected seeds—mostly Robusta type—have been introduced from neighboring countries. Government plantations have reported yields up to 800 pounds per acre.

Early in 1959, the government made coffee land available in Equatoria Province, to interest more farmers in growing it. The small amount now grown falls far short of the country's needs; therefore substantial quantities must be bought abroad each year. A recent survey indicates that

wide areas of the southern part of the country have ideal soil and climate for coffee cultivation.

Concessions, in the form of rights to tracts of land in the south, have been given to a British firm to develop the Sudanese tobacco industry. And a cigarette factory—opened in late 1957—is expected to meet most of the country's needs, when operating to full capacity. The country is successfully growing small quantities of Virginia-type tobacco in several areas because it fits well into the prevailing cropping pattern, but output is still far short of demand. Cigarettes are now imported from Egypt and the United Kingdom.

At the request of the Sudanese Government, the International Cooperation Administration (ICA) recently made a field survey of the entire country to determine the feasibility of producing either cane or beet sugar. Its report has been submitted to officials, but the findings have not been disclosed. Meanwhile, sugarcane is being grown successfully in several parts of the country, and sugar beets are being produced in experimental plots. The government would like to see the country grow its total sugar needs and thus save foreign exchange. Currently, annual sugar imports amount to well over 100,000 metric tons, with a value exceeded only by imports of textiles and petroleum.

Agricultural Industry

Sudan's planners are also concentrating on the industry related to agriculture. One of Sudan's most significant industrial undertakings is its effort to build a modern textile industry. An \$18-million textile plant, to be built in or near Khartoum, has been approved and the Development Loan Fund has indicated its willingness to advance the money to buy equipment. Most textiles are now imported; less than 1 percent of Sudan's annual cotton crop is made into cloth within the country.

Last year, Sudan opened a date processing plant in northern Sudan. This operation is especially significant because it will serve as a model for future plants. It uses U.S. and British processing and packing machinery and

packages high-quality, fumigated dates in plastic bags and cellophane-wrapped cardboard cartons for both retail domestic and export trade. These facilities will provide dates for domestic consuming areas far from production centers. Total annual output of dates stands at about 30,000 metric tons; about 80 percent is used at home and the remainder is shipped abroad. However, current imports of dates from Iraq about equal Sudan's exports.

Assistance

Widespread changes in the economy are requiring financial and advisory assistance. Sudan is getting both from a number of sources. A newly established bank gives credit more readily to farmers who are growing products other than cotton; and the Nile Water Supervisory Committee is favoring growers of new cash crops by refusing to license new private pump schemes utilizing Nile water to irrigate cotton.

Foreign assistance is also being made available to the Sudanese. Last year, at the government's request, ICA established an Operation Mission (USOM/S) in Sudan. During its first year of operation, the Mission has attempted to coordinate its efforts with the country's development program. The Food and Agriculture Organization of the United Nations (FOA) has contributed aid in the form of studies and recommendations. And the International Bank recently loaned the country \$39 million to improve and modernize transportation facilities.

Further the Sudanese are trying to accelerate the pace of foreign private investment. Last year they reaffirmed approval of the Enterprise Law of 1956. This act permits various special concessions to be granted to enterprises established with foreign capital.

Land Development

A difficult financial situation during the past 2 years has slowed economic activities but has not impeded land development projects. The Managil Extension, one of the largest projects, will add 832,500 acres to the rich lands of the Gezira. The second phase of this project, bringing the total completed to about 453,000

(Continued on page 20)



Small photo shows how newest and most modern cotton textile mill in Philippines looked in 1957; large photo shows it today. Its capacity is still rapidly expanding, and so are its requirements for raw cotton.



Progress in Philippine Cotton Textile Industry

By Guy A. W. Schilling
Foreign Agricultural Service

When I last visited the Philippine Republic 2 years ago, the young cotton textile industry there was growing fast. Returning this spring, I found that, despite the country's current economic and political problems, this growth is still going on. The number of mills has jumped from 11 to 20; the number of spindles, from 139,000 to nearly 270,000. If this continues, the Philippines will some day certainly become an exporter of cotton textiles instead of an importer.

The forces that first began this expansion back in 1954 are still operating. Philippine consumers still have large, unsatisfied needs for textiles. There is still a foreign-exchange shortage that limits textile imports. And Philippine industrialists are still seeking useful ways to employ both workers and capital.

The goals, as stated to me in 1957, are a spinning industry of 500,000 spindles and a weaving industry of 10,000 looms. Equipment due to be installed by December 1959 will bring the spindles to over 300,000 and the looms to around 7,500. At an estimated two-fifths of a bale of raw cotton per spindle per year, raw cotton consumption could be running at an annual rate of 120,000 bales by 1960 and 200,000 bales by the time spindleage reaches the goal. Since the new mills as well as the old use U.S. cotton almost entirely, this could be a happy prospect for our exports—provided we make sure that they are satisfactory both in quality and price.

The past 2 years have brought the industry greater efficiency as well as greater capacity. In 1957, a number of foreign technicians were helping set up new plants and were building a trained labor force; others have been

hired since. This use of foreign experience is paying off in accelerated progress. Two mills built since 1957 are already putting out products that meet the high standards of old-line textile countries. The ability to produce quality goods, plus further expansion in capacity, will some day bring export earnings if foreign markets can be won.

The Philippine industry may have some difficulty meeting its goals. Allocations of foreign exchange for purchases of machinery abroad are not easily obtainable at the moment. And even at its present stage of development, the industry is acutely short of raw cotton. Philippine mills need a constant flow of cotton to run well and efficiently; and at the time of my visit, none of them had on hand the 4-month stocks considered essential. Most mills had reduced production to avoid a complete shutdown.

The Philippine cotton crop, at an estimated 3,000 bales for 1958-59, cannot begin to supply the country's needs. Progress is slow; production has increased only about 1 percent over last year's, and area only 3 percent. The irrigation problem in particular needs to be solved. The General Agricultural Corporation, chief cotton producer, has engaged crop and irrigation specialists from Israel to help make cotton production pay; but the emphasis seems to be on diversification rather than cotton alone. So far, imports of U.S. cotton—in the past largely under P.L. 480 and ICA—have been the foremost source of supply for Philippine mills. The country is a good customer for U.S. cotton; and considerate service, plus close personal contact with its mills and agents by our cotton trade, should go a long way in helping to keep it so.



Indian women wait in line in Calcutta to purchase nonfat dry milk in 1-pound cellophane bags. The price is equivalent to about 16 cents in the U.S.

MILK MISSION Visits the Far East

By **FRANK E. RICE**

Photographs by **Pearl S. Rice**

This past year Dr. Rice, former executive secretary of the Evaporated Milk Association, and Frank Martin of Martin-Century Farms spent 4 months in the Far East studying the market potential for milk. This two-man mission was selected by the Dairy Society International and FAS, and was financed by P.L. 480 funds accruing from sales of U.S. farm products abroad. The following article is briefed from the team's report.

"Increased milk production here depends on the buffalo more than on the dairy cow," said one of the top dairy officers in the Indian Government to our milk team during its tour of India. "Let live is our attitude toward dairy cattle whether they are good producers or merely boarders, so we can do little toward breeding for high milk production."

The breeds of buffalo used for milk are no mean producers. The Indian Council of Agricultural Research estimates that the average buffalo produces $2\frac{1}{2}$ times as much as the indigenous cow; and on one of the country's experimental farms strains of buffalo have been developed that yield well over 10,000 pounds of milk per year. But ours was not an animal

husbandry mission. We were instructed to determine the needs of the people we visited for milk products exportable from the United States, and how such milk products might be used more effectively.

India is on the milk-deficit side of the ledger and so were the other countries we visited—namely, Pakistan, Burma, Thailand, and Ceylon. They are likely to be in this position for a long time to come. In India, milk production is estimated at 5 to 6 ounces per person a day. Pakistan averages about 7 ounces per person, and Burma and Ceylon, 1 to 2 ounces. Every ounce that can be produced in these countries is needed, and large quantities of milk in its various forms must be imported for even minimum nutrition. Indian nutritionists have set up a target of 10 ounces, which, of course, is still far below the per capita use of milk and its products in Western countries — 30 ounces in the United States, for example.

Milk "Toning"

We got one answer to our question on how U.S. milk products can be used from D.N. Khurody, Milk Commissioner for Bombay State. "We in India," he said, "can use, and are using, large amounts of nonfat dry milk for mixing with buffalo milk."

Buffalo milk is almost exactly like

cow's milk except for being high in fat—7 percent to 10 percent; also the milk from dairy cattle in India and neighboring countries often runs above 5 percent. So more than 10 years ago, Mr. Khurody started a program of mixing imported nonfat dry milk with the local milk supply to bring the fat content down to 3 percent. This product is sometimes called "toned milk."

Today the toning operation is applied to half the Bombay milk supply, requiring more than 1,500 tons of nonfat milk powder per year. Toned milk tastes and looks like the milk we Westerners are used to, and it is sold to the consumers at a price less than half that of buffalo milk. Nutritionally it is better for people who are particularly in need of the nonfat constituents of milk.

Also, Bombay is now testing for consumer acceptance milk that has been toned down to 2.5 percent fat, with the nonfat solids raised from 9 percent to 10 percent. The reaction appears to be favorable—and there is little reason why it should not be. In many places in the Western world people are buying as a matter of choice milk standardized at 2.5 percent fat and in many U.S. cities, 2 percent. By toning to these still lower fat levels, the limited milk supplies of the Far Eastern countries can be

stretched still further, with a correspondingly greater demand for world-surplus nonfat milk.

Toning has been accepted in other cities too, notably Madras and Calcutta. Delhi is now building a very large milk plant for toned milk and other dairy products. But in the other Far Eastern countries, this program is still in the discussion stage, though it has been urged by those who have studied local conditions.

Recombined Milk

In Bangkok a modern milk plant has been producing "recombined milk" compounded from nonfat dry milk and anhydrous milk fat for 2 years. To acquaint the community with the new product, Dairy Society International (DSI) and the Foreign Agricultural Service (FAS) joined in an educational program. Sampling was conducted in schools and educational literature distributed. In addition, the plant organization is teaching the retailers in Bangkok and neighboring towns our American methods of handling and merchandising milk and ice cream, which is also manufactured by recombining imported milk ingredients. Trade fairs have also stimulated interest in recombined milk and ice cream throughout the Far East, and here, too, DSI and FAS cooperated in sponsoring exhibits.

There have been other ways in which U.S. exportable dairy products have been adapted to foreign tastes. Ghee, a form of fat common throughout the East, has been made from U.S. butter and found acceptable. About 3 years ago a few hundred pounds of melted cheese flavored with some of the spices favored by the people of Pakistan were prepared in Wisconsin and shipped to that country. When we visited Pakistan we were told that the only thing wrong with the experiment was that they did not get enough of it!

Mixing imported nonfat milk with locally produced plant oils has attracted some attention; also there appear to be some doubts about the products. In Madras, India, a few years ago coconut oil was used in compounding and did not prove to be acceptable; but in the Philippines.



Above, milk collection center near Lahore, Pakistan. Right, separating the cream from high-fat buffalo milk. In many of the Far Eastern countries increased milk production depends more on the buffalo than it does on the dairy cow.



Below, street scene in Calcutta. Milkman delivers milk to customer's door in the original "package" thus assuring freshness and freedom from adulteration.



where it is called "filled milk," fairly large operations are under way. Market acceptance may depend on how strongly the consumer is conditioned to demanding the natural constituents of milk rather than substitutes of lesser food value.

New Products

Our mission was directed to study particularly the possibility of new products that might be developed using our surplus dairy products with food items that are in plentiful supply in host countries, or with other U.S. products that are also in surplus, such as wheat. Research of this nature is best done by technologists and institutions, so these we sought out—the National Dairy Research Institute in India, the Central Food Technical Research Institute in Mysore, and others. We found several interesting projects. One of them involved the compounding of nonfat dry milk with groundnut (peanut), soybean, and other flours to make high protein foods, so needed in many of the underdeveloped areas of the world. Another was a wafer, or biscuit, very high in the nonfat portion of milk that could be used in mass feeding. Dr. E. O. Anderson, Professor of Dairy Technology at the University of Punjab in Lahore, prepared some wafers in his laboratory. After trying them out on children in Lahore, the word got around and his car would be surrounded whenever he drove into a school yard. Simon Polak, UNICEF director for Thailand, reported a salvaging job they did on several tons of nonfat dry milk that had become caked. They broke it up, melted it down with water, sugar, and flavoring, and served it to the children in the form of fudge.

We also investigated fermented milks, such as lassi, which are favorite foods in some areas and which keep well. The question is—could imported nonfat milk be used successfully for making such foods? Also, Burma and some other countries in that part of the world are reasonably well supplied with sugar, which is a good preservative for milk. Apparently there are possibilities along this line, for Dr. L. H. Burgwald of FAS dur-

ing his stay in Rangoon demonstrated that local milk handlers could make a recombined sweetened condensed milk by combining imported nonfat dry milk and anhydrous milk fat with Burmese sugar.

The Calcutta Experiment

Under the direction of Dr. S. C. Ray, Milk Commissioner for West Bengal, P. L. 480 nonfat dry milk has been packaged in 1-pound cellophane bags and sold for about 16 cents in 50 distributing centers in Calcutta. The demand has been so great that people stand in line during the hours the centers are open. But even though identification cards are issued, it is believed that some of the product finds its way into the black market where it sells at very high prices. Dr. Ray hopes to control this by an ordinance imposing heavy penalties for selling above ceiling prices. He also has a problem getting the powder packaged, as he does not have a machine designed for the purpose. Our team felt that this method of making our surplus dairy products available to the consumer in foreign countries merits further study, and that other sizes of packages could be tried out.

Private Trade Milk Foods

Private trade should not be overlooked as an important outlet for U.S. dairy products. After all, private enterprise was the main factor in international trade before governments began to accumulate surpluses, and still is in many areas. Throughout the Far East, in every retail food store are to be found imported evaporated milk, sweetened condensed milk, dry milks, infant foods, heat-sterilized cheese, and other products. Foreign exchange situations and import duties determine the amounts available and the prices charged. In Bangkok, for instance, evaporated milk can be bought at a price which permits making a quart of milk for about 19 cents, and it is vitamin-D fortified. Dry whole milk sufficient to make a quart costs a few cents more.

There should be no consumer objection to the flavor of these forms of milk. People in Eastern lands generally know only the taste of milk that

has been boiled a long time; and millions of children in all countries are enthusiastically accepting the nonfat dry milk flavor, since that is the type of milk dispensed by the welfare agencies. A UNICEF representative in Burma said, "We are daily refuting the statement often made that the Burmese cannot easily become milk users."

Local Milk Supplies

In Maymyo in Burma there is a plant making and canning sweetened condensed milk, with an intake of 2,700 pounds of milk per day; but this plant is closed part of the year. The Pakistan Army operates an evaporated milk plant at Okara, and we saw a small plant in Karachi condensing sweetened milk and canning it by hand. Also, in East Pakistan there is a plant turning out sweetened condensed milk in cans as well as powdered skim milk.

Certainly it is a worthy aim for any country to try to be self-sufficient in providing its own needs for milk and milk products. But until local supplies are available in sufficient quantity to make it possible to manufacture milk foods as economically as in the milk-surplus countries, the meager local supply should preferably be used for immediate consumption in traditional forms—as pasteurized and sterilized milk (particularly as toned milk), cream, ice cream, and so forth.

Even in these milk-deficit countries there are areas where the outlook is good for dairying becoming a profitable form of agriculture. Recent surveys have indicated that the northern (Punjab) area of India is one, and two companies with foreign resources and know-how are now in the process of establishing plants there to manufacture milk foods such as are now being imported from milk-surplus countries. In Anand, India, the problem of assembling sufficient milk to run a manufacturing plant has been solved by collecting milk from 40,000 producers in 130 villages. It should be noted, however, that this operation was made possible by government subsidy and aid from international agencies for plants, equipment, and roads.

Greece's First Five-Year Plan Highlights Agricultural Goals

By Elfriede A. Krause
European Analysis Branch
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Greece has joined the large group of countries with long-term economic development plans. Several years ago, the Greek Government announced that such a plan was being set up, and since then it has discussed its program with the Organization for European Economic Cooperation (OEEC). Only recently, however, has the official "Preliminary Five-Year Program for the Economic Development of Greece, 1959-1963" been published.

Though the program is still termed preliminary, the goals it suggests are important because they indicate the future direction of Greek economic development. Some of them seem overly optimistic, at least for achievement within 5 years. But in appraising the possibility of their realization, it should be remembered that Greece,

one of the poorest countries in Europe and one of the hardest and longest hit by the war (Communist guerrilla activity continued for years after the war), has made an excellent record of recovery and economic expansion. (Substantial help from the United States was an important factor in this development.)

Agriculture and the Economy

Greece is still largely an agricultural country; about half of the working population is engaged in farming and about a third of its national income is derived from that source. Plans for continued agricultural development play an important role in the country's economic development program.

Up until 1950, most of Greece's agricultural expansion consisted of recovery from the very low level of wartime production. Since then output has increased far beyond prewar. During the years 1956-58, farm production averaged over 40 percent higher than before the war; on a per capita basis the increase was about 15 percent.

Gross national product increased by 31 percent from 1953 to 1957, an average of 7 percent a year. But Greek per capita income is still very low—little more than \$300. The goal set for the Five-Year Plan is a further increase of 33 percent in gross national product, which would raise per capita income nearly 30 percent. Such an increase would make possible a considerable rise in the standard of living, including dietary improvement—higher quality, less grains, more livestock products—which is called for in the plan. It would also reduce the number of unemployed and underemployed—at present estimated at a sixth of the labor force—and provide jobs for additional workers.

Program Goals

Like a number of other European countries that for years have supported wheat production to insure maximum self-sufficiency in bread grains, Greece has overreached its goal and is now trying to cut down its wheat acreage. Plans are to reduce it nearly 12 percent by 1963, enough to cut output despite further expansion in yields. In 1959, however, wheat acreage actually increased and again a near-record crop of about 1.8 million tons was harvested. Acreages of most other crops—mainly feed grains and other feed crops, cotton, sugar beets, and fruit—are expected to increase, resulting in a total of about 5 percent more cultivated land.

The Five-Year Plan also calls for nearly 30 percent more irrigated area and improving large areas of land through flood control and drainage measures. Technological improvements in farm practices, including better seed selection and rotation systems, more fertilizer, pesticides, and machinery, and better feeding and breeding practices, are counted on to increase farm productivity. To bring about these advances, the agricultural extension service—already much improved—is to be further expanded; and more credit will be made available to farmers. Also, improved processing and marketing facilities are planned.

Expanded cotton production is expected to be partly absorbed by the domestic market, but the chief outlet will be European markets. The program also counts on larger European outlets for fruits (citrus, peaches, apricots, cherries, sultanas) and vegetables, including potatoes and pulses. Forecasts for tobacco exports are less optimistic, although some increase is called for. More livestock products are planned to provide for expanded domestic consumption and to reduce import needs. The goal is to expand livestock output and at the same time become self-sufficient in feed grain output. The most striking change planned in the supply picture is the growing of sugar beets for sugar production. The first Greek sugar refinery

(Continued on page 18)

GREEK PRODUCTION OF SPECIFIED FARM PRODUCTS AND GOALS UNDER THE FIVE-YEAR PLAN

Commodity	Average 1935-38		1952-54	1958	Goal 1963
	1,000 m.t.	1,000 m.t.	1,000 m.t.	1,000 m.t.	1,000 m.t.
Wheat	767	1,223	1,287	1,715	
Corn	255	264	226	408	
Rice, milled	4	76	67	60	
Tobacco	61	57	77	100	
Cotton, unginned	44	100	192	332	
Sugar beets	0	0	0	600	
Currants	158	76	83	90	
Sultanas	29	40	42	75	
Citrus fruit	55	178	266	345	
Olive oil, edible	113	114	94	140	
Meat	110	99	144	174	

GREEK TRADE IN SPECIFIED FARM PRODUCTS AND GOALS UNDER THE FIVE-YEAR PLAN

Commodity	1938	Average 1952-54		1958	Goal 1963
	1,000 m.t.	1,000 m.t.	1,000 m.t.	1,000 m.t.	1,000 m.t.
IMPORTS					
Wheat	475	249	68	50	
Feed grains	65	2	111	0	
Sugar	81	80	126	35	
Meat	(1)	(1)	30	36	
Milk, powdered and condensed	2	10	18	0	
Cheese	1	3	10	0	
Vegetable oils	(2)	3	5	5	
EXPORTS					
Tobacco	49	48	62	80	
Cotton, ginned	(3)	8	39	75	
Currants	74	62	64	70	
Sultanas	30	42	37	70	
Citrus fruit	15	12	37	70	
Olive oil	21	7	9	10	

¹ Comparable data not available.

² Less than 500 tons.

³ No exports; 2,500 metric tons of imports.



Dr. Harry Parker, director of the USDA entomology laboratory in Paris suburbs, dissects alfalfa seed for presence of parasites of the alfalfa seed chalcid.

Laboratory worker sorts and counts the chrysalids of *Senecio* moth preparatory to packing and shipping material to U.S.



Controlling Insects

Popular concern over the residues of insecticides has led the U.S. Department of Agriculture to focus on biological control of farm pests. European headquarters of this bug-against-bug warfare is just outside Paris.

From a small laboratory just outside the city of Paris a handful of U.S. entomologists are busily engaged in a highly specialized phase of man's war on insects. Their job is to discover, collect, and send to the United States insects that show promise of controlling some of our worst agricultural pests.

This effort to control insects with their natural enemies began 70 years ago, and USDA entomologists have combed much of the world for parasites or predators of our most destructive pests. So far 95 species have become established in the United States and many more were introduced, but failed to survive. In Western Europe, this activity has been going on since 1919 and has become an established part of our overall strategy in battling

insect enemies. In recent years, however, the popular concern over insecticidal residues has focused increased attention on biological control.

To a layman the idea of controlling one insect with another insect is fascinating. It saves the expense of buying and applying an insecticide and there is no residue problem. Many years ago a wit who knew more about rhymes than insects penned the lines:

Big bugs have little bugs upon their backs to bite 'em.

Little bugs have littler bugs, and so ad infinitum.

If the job were as simple as that, we would now be controlling all our insect enemies in this manner. Unfortunately, biological control has limitations. It is not just a matter of finding a parasite or predator. You

have to be sure it will behave as well in its new home as it does in its native land. Then there is the job of getting it established in a new home.

To establish a species in a new region several requirements must be met. The climate must be similar to the native home of the introduced species. The life cycles of the species to be controlled and the introduced parasite species must coincide—that is, they must be synchronized—otherwise the new species will have no source of host material. And the introduced species must be studied carefully to make sure it will not attack other friendly insects.

Biological control of insects is a part of the overall research job carried on by the Entomology Re-

With Their Natural Enemies

By Ernest G. Moore
Agricultural Research Service,
USDA



In boxes going to the U.S. Dr. Parker packs fresh plant food for caterpillars of the Senecio moth. Some 95 species of predatory pests have been established in the United States through this work.

search Division of the Agricultural Research Service. In charge of the Western Europe Laboratory is veteran entomologist Dr. Harry Parker. He has a staff of four at Paris and one man, Dr. Lloyd Andres, at Rome.

The emphasis at the Paris laboratory is now on insects for weed control. Dr. Andres is giving full time to this phase of the work, and Drs. John Drea and Thomas O'Connell are now in Morocco searching for insect enemies of halogeton, a poisonous weed that has damaged thousands of acres of range lands in the western United States.

An example of what can be done is the successful control of the Klamath weed in California by a beetle introduced from France, by way of Australia. Land values have risen. Ex-

penditures for the control of the weed are negligible. And all indications are that this noxious range plant will be held in check and that its insect controls will perpetuate themselves.

The first mission of the European laboratory—and the purpose for which it was established—was to collect natural enemies of the European corn borer. Between 1920 and 1938, nearly 24 million hibernating borers were collected in France and Italy and sent to the United States. From these, 18 species of parasites were recovered. Importations from the Far East brought the total to 24 species of parasites, of which 6 have become established. One of these is now playing a big part in control of the corn borer in Iowa, Illinois, and Indiana.

Through the years Dr. Parker and his staff have collected and shipped home hundreds of parasites and predators, many of which are now helping to control pests of fruits, vegetables, grain and forage crops, and forest trees. The Department has a laboratory at Moorestown, N. J., especially fitted to receive shipments of insects from Dr. Parker and other collectors throughout the world. When the parasites have increased their numbers sufficiently they are shipped to State or Federal entomologists for release under field conditions.

The State of California has been particularly active in introducing insects for biological control. Many of the shipments from the Paris laboratory have been made at the request of the California State Department of Agriculture. The first successful large-scale demonstration of biological control of insects was made in California, with the introduction of a ladybird beetle from Australia to control cottony cushion scale in citrus orchards. Dr. Parker's staff is now cooperating with California entomologists in the search for insects to control weeds.

The International Age in Agriculture. II.

Two topics of particular interest to our readers—technical assistance programs in agriculture and the world agricultural market—were discussed in the fall lecture series of the USDA Graduate School. Here are some highlights of these talks.

Successful measures to reduce mortality and morbidity in the underdeveloped countries carry in their wake increased demands for food and clothing, and this, according to Dr. Norman C. Wright, Deputy Director General, Food and Agriculture Organization, should indicate a greater need for technical assistance in agriculture.

Analyzing the technical aid programs of the U.N. Specialized Agencies, Dr. Wright pointed out that FAO's experts number 722 as against 946 for the World Health Organization. Some substantial increase in FAO's share of technical assistance is necessary to redress the balance, he felt. But it is significant to note that ICA's (International Cooperation Administration) program does reveal this desirable trend: 867 experts in the field of food and agriculture to 334 in health and sanitation.

"If the need for such an increase in agricultural technical assistance is accepted, in what direction should the program be expanded?" Dr. Wright asked. The answer, he believes, lies in establishing efficient administration and advisory services in the countries being helped instead of, as in the past, concentrating on merely technical know-how at the farm level. To support this, he quoted a report which claimed that the greatest single cause of unsatisfactory results was "lack of adequate national administration and technical services, which hampered close and prompt follow-up activities."

Dr. Wright pleaded for longer assignments in technical assistance, and the relating of these assignments to parallel developments within the over-all economies they serve. He also stressed the need for closer cooperation between the various programs to avoid overlapping and advocated the setting-up of a clearing house of technical assistance information.

Much of Dr. Wright's talk was de-

voted to the comparative advantages of bilateral and multilateral programs. In his opinion, it is debatable as to which offers the best scope for the distribution of assistance funds. But the trend, as he sees it, is toward greater multilateral action, though this should not cancel out bilateral programs, which have substantial advantages.

World Agricultural Market

Closely related to Dr. Wright's talk was that of Dr. Max Myers, Administrator, Foreign Agricultural Service, on "The World Agricultural Market—Opportunities and Limitations." At the end of his address he summarized his remarks as follows:

"I have touched upon the world food supply situation, with special reference to needs of the underdeveloped countries. I have made the point that the gap between 'enough' and 'not enough' is rather narrow, and that there is a chance to close the gap. In the case of U.S. food exports, I have pointed out that our programs have two practical objectives. One is economic. It is aimed at strengthening U.S. farmers' prices and incomes directly and indirectly. The other goal is in the field of foreign policy. In this area we are using our exports to strengthen the Free World by meeting immediate needs and promoting long-range economic development. Friendship for the United States and respect for democratic institutions have been satisfying 'by-products' of our efforts to use food in a humanitarian way.

"It is clear that opportunities exist for making greater use of exports by the entire free world as well as by the United States. At the same time, as I have indicated, some real and difficult problems exist.

"Are U.S. export opportunities canceled out by the problem? By no means. We can be moderately opti-

mistic about the future of our U.S. agricultural export program. We are efficient producers of farm products. We have the merchandising know-how. We have potential customers. The big problem is how to use our advantages in practical ways to bridge the gap between our surpluses and world needs.

"We shouldn't expect miracles. Trade will not develop by itself. It must be a carefully planned effort by private trade interests and government. We must build trade methodically—and continuously. We must concentrate on exporting quality products. We must keep our prices competitive in world markets. We must have a willingness to 'beat the bushes for business' as successful businessmen have done since the beginning of time. We must have a willingness to accept imports, so that our foreign customers can earn the exchange with which to buy our products. We must be willing to face and solve domestic agricultural issues, because these eventually affect our export activities.

"In a global sense, there must be a broadened use of modern agricultural productivity in meeting world food needs. On the one hand, there must be increased sharing of capital and know-how, to stimulate economic development and increased agricultural production in the less-developed countries. On the other hand, there needs to be increased sharing by the food-surplus nations with the food-deficit nations. Actually, the Free World has no alternative to solving the problem of hunger. But the Free World should not look for alternatives. In helping to eradicate hunger, there are countless opportunities. There are opportunities in business terms, in political terms, in humanitarian terms. With opportunities come responsibilities, of course. Some of these responsibilities are difficult and complex. But we can and will face up to them. In so doing, we will be writing one of the greatest chapters in all the world's history."

Soviet Grain Export Outlook

By Lazar Volin
Foreign Agricultural Analysis
Foreign Agricultural Service

The Soviet Union, after a long period of insignificant exports, has again become a substantial exporter of grain, principally wheat. Most of this has been going to the Eastern European satellite countries. Out of the more than 140 million bushels of Soviet wheat exported in 1957-58, almost 80 percent was shipped to the Satellites; and of the nearly 2 million metric tons of rye, barley, oats, and corn exported in calendar year 1957, these countries were the recipients of two-thirds.

During 1958-59, however, a larger portion of Soviet wheat exports moved to Free World markets, where it competes with U.S. wheat. Even though this year's exports may be reduced considerably by the widespread drought, indications are that in the years ahead the Soviet Union may continue to have large supplies of wheat for export. But any assessment of the Soviet grain export outlook must take into consideration the fact that exports of grain, like Soviet trade generally, depend on government decisions. And these decisions are motivated not only by the ordinary commercial considerations of supply, demand, and price, but also by frequently shifting political-economic and propaganda ends.

Basically, though, the two things that will determine Soviet export capability are the volume of grain produced and the emphasis placed on expanding livestock output. Obvious-

ly, with a large grain crop there is a larger quantity available above domestic requirements which can be exported. It is true that under the Soviet system domestic requirements can be restricted by direct government action. But for political and psychological reasons, this has become less likely during the post-Stalin period. Therefore, the volume of production is more important in evaluating export supplies than it was formerly — though there is still a dearth of reliable data on production and utilization.

It is also obvious that because of the large Soviet program for the expansion of livestock, no substantial rise can logically be expected in exports of feed grains. A shortage of feedstuffs had long been a bottleneck in Soviet livestock production. But this does not mean that feed grain exports on the present relatively small scale—1 million to 1.5 million metric tons—will not continue and even become somewhat larger. Rye exports are also likely to remain relatively small because of a limited foreign market.

Expanded Wheat Acreage

Any significant expansion must be in wheat exports; and by far the most important fact with regard to wheat

in the Soviet Union is the increased production capacity resulting from a large expansion of acreage. By bringing virgin and long-uncultivated land east of the Volga and the Urals under cultivation, Soviet wheat acreage was increased 43 percent between 1953 and 1957, reaching a total of 171 million acres (spring and winter wheat). In 1958 and 1959, there was a decline in spring wheat, partly perhaps because of weather conditions. Also, there has been a decrease in rye acreage since 1953. Yet this past year the combined wheat and rye acreage was still somewhat over 200 million, or 40 million acres more than 1953.

It is as yet too early to gage the full extent to which the "new lands" program has permanently increased Soviet wheat production. Still, there is enough information to show that this great expansion of the wheat area has also had its weak side. Most of the new acreage is in semihumid and semiarid zones, where the growing season is short, droughts are frequent, and yields vary widely from year to year. Consequently, it is well recognized in Soviet agricultural circles that, in order to prevent dust-bowl conditions and crop failures, a part of this new lands acreage—perhaps a fifth or more—should be annually rotated as summer fallow. So far this practice has not been followed to any extent. To replace the acreage, additional new land would have to be brought under cultivation if the cropped acreage is to be maintained.

Stockpiling

The instability of production because of the sharp fluctuations in yields places a serious limitation on the export capabilities of the Soviet Union. It certainly makes large stocks of grain essential. Famine conditions in the past and strategic considerations no doubt have strengthened the Soviet propensity for stockpiling; so that it is not surprising that following the

HYPOTHETICAL SOVIET WHEAT AND RYE BALANCE, 1965

Wheat:		Mil. bu.
Production (160 million acres \times 13.5 bu.)	2,160
Waste (15 percent)		-108
Seed (160 million acres \times 2.2 bu.)		-352
Net production		1,700
Rye:		
Production (42 million acres \times 16 bu.) ..		672
Waste (15 percent)		-34
Seed (42 million acres \times 2 bu.)		-84
Net production		554
Wheat and rye:		Mil. m.t.
Net production (46 + 14 million m.t.)		60
Food requirements (234 million population \times 0.2 m.t. of grain)		47
Residual supply 160 million m.t. — 47 mil m.t.) ³		13

¹ Or 46 million metric tons. ² Or 14 million metric tons.

³ Available for exports, stockpiling, animal feeding, etc.

large 1958 harvest Soviet Premier Khrushchev emphasized the need for bigger stocks. Once stocks reach a certain level, it is only logical to expect stockpiling to diminish, unless reserves are depleted by a crop failure. Therefore, in the long run, barring a more-than-normal succession of mediocre crops, stockpiling is not likely to reduce the export capabilities of the Soviet Union.

Consumption Shifts

A far more serious limitation on exports arises from increased domestic grain requirements. With a fairly heavy rate of seeding—more than 2 bushels to an acre of wheat—large quantities of grain have to be used for sowing of the large acreage. Then there is the element of waste which runs higher than in Western countries and is assumed to be around 5 percent of the harvested crop. Next and most important is the use of grain for human food.

As food, wheat and rye should be considered together because the two bread grains are to a large degree interchangeable and complementary. Formerly there was heavy reliance on rye; at present, wheat consumption is probably greater. The future may see an increasing shift away from cereal consumption as the Soviet Union's urban population grows. (It is now close to half of the population.) So while the present per capita consumption of bread grains is not known, it is doubtless less than the 550 pounds per year that were being consumed in the 1920's. Moreover, it seems unlikely that this figure will be reached again.

Whatever per capita consumption is, it is magnified by the USSR's yearly population growth which has been estimated at 3.5 million. On this basis, the present population of 208.8 million (according to the census of January 15, 1959) will have increased by nearly 25 million by the end of 1965. If we assume, in the absence of any definite information, that an average of about 440 pounds of wheat and rye is a realistic 1965 per capita consumption figure, then the Soviet Union will be confronted with increased requirements of close to 5 million metric tons.

Hypothetical Balance

If certain other things are assumed, namely, average weather conditions, acreages not too different from those of the current year, and a moderate increase in yields, a hypothetical balance for 1965 can be postulated. This balance indicates a residual supply of 13 million metric tons of wheat and rye, or close to 480 million bushels of 60 pounds that would be available for export, stockpiling, and animal feeding. Also, a small quantity might be needed for industrial purposes, principally for making alcohol.

Assuming too that large-scale stockpiling would not be needed, the allocation of this residual supply would depend on whether exports or animal feeding had priority. It is quite certain that the Soviets would have to export 2 million to 3 million tons of bread grains to the Satellites and even more should a poor crop occur in those countries. Further, more active trading of the USSR with the industrial countries of the West, as foreshadowed by the Soviet-British 1959 trade agreement, would tend to spur grain exports as a means of payment for imports, unless the Soviets would become more willing to part with their hoarded gold and use it for international payments.

Seriously competing with exports is the need of grain for feeding the already greatly increased livestock numbers, let alone those resulting from the further expansion of the industry which is planned. How much of the bread grains is used for this purpose is not known. Probably the amount varies with the size and quality of the crop—the larger the crop and the poorer the quality, the more of it is fed to livestock.

The Khrushchev administration, of course, has emphasized corn for livestock feeding, despite the fact that most of the country is climatically ill-suited for corn culture. It is problematical whether production of corn and other feed grains will increase so much faster than production of food grains that the feed requirements will be met. Thus, a strong commitment to the livestock program and to the raising of the standard of living may dictate either a heavy diversion

of bread grains to animal feed, or a shift to the growing of feed grains.

Possible Trend

It is impossible of course to foresee the actual order of priorities in grain utilization in the USSR that may be established 6 years hence. The government certainly has the power to make a choice. No doubt the whole residual supply in the bread-grain hypothetical balance and much more could easily be absorbed by animal feeding. Perhaps it would be more realistic to assume that half of it would be used as animal feed and about 2½ million metric tons exported to the Satellites. This would leave 4 million tons (equivalent to approximately 150 million bushels) available for export to Free World markets. Yet it cannot be overemphasized that the figures in the residual supply on which exports depend are predicated on a number of assumptions, of which the continuity of the large bread-grain acreage and average weather conditions are central. Possible deviations from these assumptions subject the figures to a considerable margin of error, both of overestimation and underestimation. Nevertheless, as they stand, they offer a clue to the future trend in Soviet grain production and utilization.

FAS Completes Series On Milk Recombining

Recombined Condensed Milk, Recombined Sterilized Milk, and Toned Milk, FAS-M 66, is the last in a series of three publications issued by the Foreign Agricultural Service on how recombining can increase the supply of dairy products in milk-short countries. All are how-to-do-it publications for manufacturers.

The first, *Recombined Milk*, issued in 1955 as Foreign Agriculture Report No. 84, is the basic document. It gives technical information on establishing plants to recombine nonfat dry milk and anhydrous milk fat into fluid milk.

The second publication—*How to Use Recombined Milk Ingredients in Manufacturing Dairy Products*, FAS-M 21, 1957—like the third one, tells how the recombining process can be applied to the manufacture of dairy products.



U.S. citrus fruits arrive in Europe. Above, Elmer A. Reese, U.S. Agricultural Attache, (left) inspects carton of U.S. oranges in Danish warehouse, and right, unloading California lemons at London Docks.

Trade Prospects for FRESH CITRUS



The United States is the world's largest producer of citrus fruit, contributing over 40 percent of total world supplies. It is also the only major producing area which exports fresh fruit every month of the year. For the past 5 years, these shipments have added up to over \$30 million worth annually, highest in value of any U.S. fruit exports.

This export market is important to U.S. citrus. More than one-eighth of all the citrus fruit grown in this country is sold in foreign outlets. Canada is the biggest buyer, taking over half of our foreign shipments—although Canadian sales are handled much like domestic ones. Overseas, Western Europe is the leading customer; in this area our sales have mounted steadily since World War II.

Rising Production

Supplies are expanding in the foreign citrus-growing countries. Orange production in the Mediterranean countries is now about as large as that in

the United States; each area produces roughly 40 percent of the world's total orange supply. With regard to lemons, the Mediterranean area, especially Italy, produces nearly as many as does California, and the two areas combined account for 90 percent of the world's lemons. As for grapefruit, the United States is by far the largest grower; our production amounts to nine-tenths of the world total.

While new plantings of oranges and lemons have occurred in most important producing areas of the world, they have been heaviest in the Mediterranean countries. Mediterranean production of these crops is expected to be one-half again larger in the next 10 years than it has been in recent seasons, provided frost does not damage the crops. Only Israel and Jamaica have increased their grapefruit plantings, but these increases have not been significant.

As production has trended upward so has consumption. The two largest consuming areas for fresh citrus are

North America and Western Europe. The latter has more than doubled its per capita consumption in the last 10 years; still, it is only two-thirds that of the United States—not counting processed citrus consumption in the United States, which is even larger. But the outlook is that Western Europe will continue to buy and eat more fresh citrus.

U. S. Share of Market

The U.S. share of this growing Western European market varies substantially by fruits and by seasons. U.S. orange exports normally provide only about 1 percent of the European supplies during the winter season when large quantities of Mediterranean fruit are available. In the summer months, the U.S. share ranges between 15 and 25 percent. South Africa is our most important competitor during this period.

In the case of lemons, U.S. supplies contribute between 5 and 15 percent of Western Europe's total imports

during the winter months. Also, California lemons have been moving to Europe in increasingly larger quantities during the summer and in the past 2 years have amounted to over 60 percent of the area's supplies. The Italian Verdelli, or summer lemon, competes with our fruit at this time.

U.S. grapefruit from Florida and Texas in the past has not been too big a seller on Europe's winter market. Recently, though, our share jumped to around 10 to 15 percent. In summer, it's a different story; grapefruit from California and Arizona supplies between one-third and one-half of Europe's requirements. Our main competitors are Israel in the winter months and South Africa in summer.

Marketing

With the future promising larger citrus supplies and thus greater competition, the foreign citrus-growing countries are becoming more and more concerned about marketing their fruit. This is to be expected. Export outlets are of greater significance to Mediterranean and Southern Hemisphere citrus countries, which export from 35 to 85 percent of their crops, than to the United States, which exports about one-tenth, fresh and processed combined. Even now, most European and Southern Hemisphere exporters of fresh citrus sell on consignment, and many have engaged in advertising and promotion campaigns. Only recently, the Food and Agriculture Organization of the United Nations decided to establish a study group to appraise the effects of increasing supplies upon market conditions.

Two factors appear to favor the United States in the marketing of citrus: First, the improved economic condition of the Western European countries, which is raising the demand for summer citrus; and second, the easing of restrictions in European markets.

Most European countries have gradually eliminated the restrictions that have limited imports of fresh citrus fruit from the United States since the war. This year Denmark removed its restrictions, and France liberalized imports of all fresh citrus except winter oranges. The United Kingdom recent-

ly liberalized imports of fresh oranges and lemons. However, it restricts imports of fresh U.S. grapefruit to the period April 1 through September 30. This limitation, put on to protect the British West Indies grapefruit industry, practically rules out imports of U.S. Gulf Coast grapefruit. The hope is that the U.K. Government will shortly ease this situation. Only Finland at present prohibits all imports of U.S. fresh citrus. And since the lowering of barriers applies not only to the current season but to future years, U.S. fruit exporters will be able to make continuing commercial arrangements which will help significantly in maintaining trade.

The adverse side of the market picture points up two things: First, increasing Mediterranean supplies plus the fact that Mediterranean orange producers have been planting varieties of seedless oranges adapted to eating out of hand and well suited to European customers; and second, the Common Market.

The development of Europe's Common Market will, in time, present problems to U.S. citrus exporters. The scheduled removal of internal duties among the six Common Market countries will provide Italian citrus growers with duty-free access to the important consumer centers in France, Germany, and the Benelux countries. Italian producers, in anticipation of this, stepped up their citrus plantings recently. At the same time, citrus exports from the United States and other outside countries will encounter the Common Market duty.

Prospects

Early indications point to a slightly larger Mediterranean orange and tangerine crop in 1959-60 than last season. Although Italy's orange crop is expected to be slightly smaller than last year, increasing supplies appear likely in Spain and North Africa. The European markets should absorb this increase in supplies readily in view of their smaller supplies of deciduous fruits; consequently, market opportunities for European imports of winter oranges from the United States should be slightly better than last season. Opportunities for exports of U.S. sum-

mer oranges will depend largely upon the Southern Hemisphere crops, and it is too early to forecast their supplies in the summer of 1960.

Anticipated supplies of both winter lemons and Verdelli lemons in Italy this coming season are smaller than the 1958-59 crop. Italy contributes more than half the Mediterranean lemon supplies and, with smaller Mediterranean shipments in prospect, opportunities for exporting fresh lemons from the United States to Europe should be good during the 1959-60 season. This will be helpful in view of California's expected record crop.

With regard to grapefruit, supplies from Israel should be about the same as in 1958-59. The U.S. grapefruit industry is continuing its efforts to develop outlets in Western Europe, and with favorable marketing conditions, should make some progress in this direction in 1959-60.

Greece's Five-Year Plan

(Continued from page 11)

has already been contracted for, and two more are planned.

Future Trade Pattern

If the goals of the Five-Year Plan are achieved, Greece expects to be able to reduce its imports of foodstuffs and animal feeds from \$82 million in 1958 to \$39 million in 1963, and at the same time increase its exports of farm products from \$185 million to over \$260 million. Greece's desire to export more farm products to the European market was undoubtedly an important factor in its decision to seek membership in the Common Market. Its application for association was accepted "in principle" in July, and details of the arrangement are now being worked out.

Greece's Five-Year Program for Economic Development appears to represent a broad framework for individual programs rather than a concrete action plan. But the publication of its agricultural goals has served notice that Greece may become a somewhat more important competitor of the United States in European markets, and may also become a less important market for our farm products.

Food Frontiersman in Modern Rome

By Bert Johnson
Agricultural Marketing Service

In Rome, amid a setting of monuments from the earliest days of the Roman Empire and of dizzying small car and scooter traffic, a young supermarket manager, Signor Attilio Morotti, is pioneering on a new frontier in Italian food merchandising. Signor Morotti is an American-trained specialist in supermarket management and manager of the American-style supermarket on Rome's bustling downtown Piazza Indipendenza, operated by the Supermercato food chain.

As a trained supermarket technician, Signor Morotti is one of the small but expanding group of specialists in modern food merchandising who are helping to bring U.S.-type supermarket operations into being in Europe. The Supermercato firm in Rome introduced the first supermarket enterprise to Italy. There are now six Supermercato stores and one independent supermarket in Rome, and one in Milan.

Development of supermarkets in Rome and Milan got under way less than 3 years ago when the U.S. Department of Agriculture and the National Association of Food Chains set up a real-life supermarket at the International Congress on Food Distribution in Rome in 1956. The Italian public's response was overwhelmingly enthusiastic. Here for the first time they saw the vast array of frozen foods, ready-to-cook poultry, fresh, canned, and frozen fruits and vegetables, dairy products, prepackaged meats, and all the other items customarily stocked by American supermarkets in order to provide one-stop shopping convenience for the housewife. Immediately following the Congress, a group of Roman businessmen established the firm, Supermercato, and bought the store equipment that was displayed.



Attilio Morotti, American-trained specialist in modern food merchandising examines packaged foods at supermarket in downtown Rome.



Precut and packaged meats are a great innovation to Italian housewives used to buying directly from the butcher.



Self-service in Italy dates back about 3 years. Crowds at check-out counter show that they like the idea.

Signor Morotti, an Italian groceryman then in his midtwenties, visited the model market and was most enthusiastic about the possibilities of the new style of merchandising. This fact came to the attention of O. W. Richards, of the Richards' Lido Market south of Los Angeles, who was one of the U.S. supermarket specialists helping with the Rome exhibit. As a result, Signor Morotti was chosen as one of the 10 Italian businessmen to be trained in supermarket operations

at supermarkets in the United States. Completing a 10-month training period and returning to his homeland, he has helped the Supermercato firm in launching its new stores and for the last year has been manager of the branch on Piazza Indipendenza.

"Supermarkets offer many advantages to the Italian consumer," Morotti explained in a recent interview. "Of course, our conditions here are often quite different from those in the United States, and so our opera-

tions differ somewhat too. Nevertheless, it is our plan and goal to furnish Italian housewives the convenience of one-stop shopping, in clean, well-lit self-service stores, with the merchandise attractively displayed and reasonably priced."

Signor Morotti stressed particularly the convenience angle—a great step forward from the many-stop shopping that is common not only in Italy but all over Europe. The European housewife still buys bread at a local bakery, poultry and eggs at another store, dairy products in another, meats at the butcher's, and so on.

As we threaded our way between customers in the wide aisles of Signor Morotti's supermarket, he proudly pointed out his large and attractive displays of prepackaged fresh fruits and vegetables, canned goods, precut and packaged meats, and frozen foods. Then he led us to his well-stocked counters of Italian breads and spaghetti, the other "pastas," and the smoked fish that the Italians are so fond of. His stock also included an imposing collection of mops, brushes, kitchen utensils, cosmetics, beverages, shoe polishes, towels, and aprons.

A look at the shelves revealed only a limited number of U.S.-produced food items, although some quite familiar names were in evidence. Closer examination showed that in most instances these branded products had been produced under franchise in countries outside the dollar areas. This lack of products from the United States is primarily the result of dollar-trade restrictions imposed by the Italian Government to build up further the country's large dollar reserve, which in April stood at \$1.2 billion, and to protect Italian interests.

"We sold a shipment of U.S. chickens and turkeys at Christmastime and for the Bufana holiday (Twelfth Night) in January," Signor Morotti reported. "These were highly successful merchandising events, and we hope to repeat them. However, we always keep in mind the matter of competitive prices, as well as the availability of dollar allocations for trade." (Italy has not yet liberalized its allocation of exchange for purchase of frozen poultry.)

Sudan's One-Crop Economy

(Continued from page 6)

acres, was finished by July 1959. Another project which has been continued is the development of ponds to enlarge the area under rain cultivation. Building is progressing at a rate of nearly 60 ponds per year.

At first, cotton will probably have priority on much of the newly developed lands. Some medium staple cotton will be planted, however, because its price has declined less than the price of long staple varieties. Where feasible, new lands are to be planted to crops other than cotton, and these crops will grow in importance as the new program operates more fully.

Sudan's rich soil, excellent climate, and varied rainfall will give impetus to the agricultural face-lifting, but some problems will have to be solved first. The inadequate transportation facilities must be improved, agricultural techniques modernized, and social conditions bettered. The water shortage will have to be dealt with, too, but the recently announced agreement with Egypt on a division of the unallocated water of the Nile could well remove what has been Sudan's greatest hindrance to farm development.

Sudan has shown a capacity for economic growth. Vast areas of land—some estimates run as high as 180 million acres—are available for agricultural development. Programs to improve and expand transportation facilities are already making it possible for formerly inaccessible communities to ship their goods to market. And shipping charges for moving these goods are expected to decline in areas of materially improved transport.

In recent years, farm production has expanded at a faster rate than that of most other African or Middle Eastern countries. The Ministry of Agriculture, USOM/S, and FAO are sponsoring programs to help modernize farming techniques which could stimulate output. It is possible that farm production will far outpace population growth in the future. And this production will be greatly diversified while the role of cotton will be reduced. In the next few decades, Sudan could emerge as one of the Middle East's most important agricultural nations.

B. R. Sen Again Named FAO Director-General

The Conference of the Food and Agriculture Organization of the United Nations, meeting in Rome October 31 to November 20, 1959, reelected Shri B. R. Sen of India as FAO's Director-General for 4 more years.

This year the Conference elected 3 new countries—Guinea, Cameroun, and Togo—and brought its membership to 79, though the memberships of Cameroun and Togo will not take effect until they attain full independence in 1960. In addition, 9 associate members were elected—Chad, Cyprus, Gabon, the Malgache Republic, Nigeria, the Federation of Rhodesia and Nyasaland, Senegal, Soudan, and Somalia. Of these, Cyprus, Nigeria, and Somalia will also take up full membership when they attain independence. Thus, in due season, there will be 82 full members.

The budget voted for the 2 years 1960 and 1961 was \$21.5 million. Deducting other income—mostly an allocation from the UN's Expanded Technical Assistance Program—there remain \$18.4 million to be raised for the period. Member governments contribute funds according to an agreed percentage scale. In addition, FAO will receive some resources from the UN's recently established Special Fund, to be used for direct technical assistance; and it draws some financial support from the United Nations Children's Fund.

Also considered was the program of work for the next 2 years. Much attention was given to the overall state of food and agriculture, including food production in relation to population trends; the concern of many countries over changes in terms of trade for agricultural products; agricultural price stabilization and price support policies; problems of agricultural development in underdeveloped areas; and agrarian reform.

The Conference agreed that 1961 should be designated as an International Seed Year; also that a campaign should be undertaken to improve nutrition around the world, culminating in a world food congress in 1963, followed by a review of members' accomplishments at the 1965 Conference.



Peanuts are a family crop; everybody helps pull the vines. Then at a central point the nuts are picked off by hand.



To market, to buy peanuts for the family's food; in background, hay made from vines that have been picked.



Customers at local market, Kaduna. Peanuts sold in the shell for food account for only a tenth of production.

Hand Sheller Transforms Nigeria's Peanut Industry

A small hand-operated peanut sheller has revolutionized the peanut industry of Nigeria in the past 4 years. Nigeria's peanut exports have long been the world's largest; but before 1955-56, when the machine was introduced, only 2 percent of the output could rank as special-grade (that is, having more than 70 percent whole nuts). With efficient shelling now possible even to small producers, the percentage of special-grade zoomed last year to 95; this year it passed 98. And these quality nuts produce a better oil.

Nigerian peanuts find their major markets in countries of Western Europe, especially the United Kingdom. In the Netherlands and West Germany they compete directly with U.S. soybeans and cottonseed as a source of oil for premium-grade margarine, with the same valuable byproduct—oil cake for livestock.

Local buying station, Bichi. Peanuts brought in by donkey are weighed, then dumped in pile for grading and bagging.



Peanut pyramids at Kano, peanut center of Northern Region. Each contains 9,000 bags totaling 750-800 tons. Nuts are stored here until moved by rail to Lagos harbor for export.



Nigerian at left is operating hand sheller. Shelled nuts, many whole, drop through bottom; shells blow away. Former mortar-pestle method yielded broken nuts mixed with shell.



Foreign PRODUCTION NEWS

British Honduras expects to harvest its first **cacao** crop within the next two years. Plantings now total about 600 acres and expansion is continuing.

The **Mediterranean** area is looking forward to its largest **almond** harvest of record. The crop forecast of 105,000 short tons (shelled basis) is 83 percent larger than the 1958 crop and 60 percent above the 1952-56 average output.

Poland, with short **meat** supplies, has inaugurated a meatless day each week. On Mondays, Polish butcher shops may not sell meat other than offal, and restaurants and canteens may not serve meat. The shortage is officially attributed to improved demand for meat and a heat wave that destroyed large quantities of hay. However, meat production in Poland has increased substantially in recent years, indicating that the shortages could be caused by a temporary lag in slaughter, fixed prices, or meat being diverted into unofficial channels.

Japanese hog slaughter is expected to be up 22 percent this year from 1958, and will probably increase again in 1960—exceeding 4.5 million head. Despite the rapid rise in hog slaughter and the resulting larger pork supplies, pork prices have risen sharply in recent months. Japanese dietary habits are changing. The people are eating more meat and have more money to buy it with.

Rhodesia is growing substantial quantities of **kenaf** in the hope of substituting it for imported jute. If satisfactory machines can be developed, kenaf bags can be produced with considerably smaller labor cost than jute. Kenaf should lend itself more readily to machine handling because it does not have to be retted and hand-stripped.

Uruguay's flaxseed acreage for the 1959-60 crop is expected to total about 345,000 acres—up sharply from the 291,675 acres planted last year. Yields, however, are expected to be lower than in 1958-59 because intermittent rains held up planting.

Portugal's 1959 dried **fig** output is now forecast at 13,000 short tons—2,000 tons less than earlier estimates. September rains seriously damaged the crop. Of the total produced, about 7,500 tons will probably be edible grade figs, although some trade sources think the edible volume may be as low as 6,500 tons.

Yugoslavia expects a bumper **hops** crop of 4,200 metric tons this year, which could very well be the largest that Yugoslavia has ever produced. Increased plantings which have come into full bearing this season are responsible. Exports could total as high as 3,900 tons, with most of them going to the United States and European countries.

Canada Takes Measures To Control Sheep Scrapie

Canada has set up a program to find and slaughter all sheep infected with scrapie. Scrapie is a chronic infectious virus disease which affects the brains and spinal cords of sheep and goats. It has a very long incubation period—1½ to 3 years or more. Although this prevents explosive outbreaks, it makes eradication more difficult.

In addition to slaughtering infected flocks—the practice before the program—all sheep and their offspring that have moved from infected flocks during the 42 months prior to a diagnosis of scrapie will be traced and killed. And suspect flocks will be quarantined for 42 months after exposed sheep have been slaughtered.

The new Canadian program is similar to one recently launched in the United States. With the program in operation, Canada will ask California, Montana, and Utah to remove their special import restrictions on its sheep.

Almonds. The 1959 world almond crop—estimated at 138,000 short tons (shelled)—will be the largest commercial crop ever harvested. It is more than double the short 1958 crop of 66,000 tons and nearly 60 percent above average. Both U.S. and foreign production is exceptionally large.

Molasses. World production of industrial molasses in the 1958-59 season was 2.6 million gallons—200,000 gallons above 1957-58 output. Since it is a byproduct of the production and refining of centrifugal sugar, growth in output of molasses and sugar can be expected to parallel one another. Cuba and Russia are the leading molasses producers, followed by the United States (including Hawaii and Puerto Rico), Brazil, and India.

Coffee. The 1959-60 world coffee crop is forecast at an alltime record high of 67.4 million bags. World coffee stocks continue to mount because although consumption is rising, production is outpacing it. Carryover at the end of September 1959 was about 38 million bags.

Pepper. Global output of pepper—forecast at 149.5 million pounds—is only slightly higher in 1959 than in 1958. More could be produced, however, if there were a significant price rise. Indonesian production is expected to be up from 1958, Sarawak's output will decline further, and India's will be unchanged. Production in the rest of the world is unimportant in world trade.

Bread grains. The world grew its second largest bread grain crop of record in 1959; it was exceeded only in 1958. Both wheat and rye tonnages were down from 1958's. The combined drop was 8 percent, but total output was still 10 percent above the 1950-54 average.



Australia To Expand Fruit Promotion in U.K.

Australia is planning to step up promotion of dried and canned fruits in the United Kingdom. The Dried Fruit Control Board will increase its U.K. publicity allocation from \$55,000 in the 1958-59 season to \$77,000 for 1959-60. At the same time, the Canning Fruit Growers Association plans to raise money for sales promotion, both overseas and at home, by a levy on apricots, peaches, and pears of canning quality. At present production levels, a maximum levy of \$1.00 per short ton would raise a fund of \$110,000 a year.

Intensified competition in the U.K. market, where prices have already been reduced, is the major reason the Australians feel this promotional program is necessary. The United Kingdom takes about 90 percent of Australia's canned fruit exports. The Australian Minister of Primary Industry says that canned fruit output is rising in all major producing countries, and that Australian output is expected to be up 40 percent by 1963.

Bulgaria To Receive Yugoslav Seed Wheat

Under a recent trade pact, Yugoslavia has agreed to deliver 15,000 tons of high-yielding wheat seed valued at \$2 million to Bulgaria, presumably in time for seeding next season's crop. Yugoslavia, in return, is to receive crude oil, oil cake, sunflowerseed, and beans from Bulgaria.

The Yugoslav wheat seed is to consist entirely of Italian varieties. Yugoslav farmers have been sowing increasing quantities of these high-yielding varieties in recent years, in line with the government's policy to make the country self-sufficient in wheat. Favorable results in Yugoslavia apparently have encouraged Bulgaria to try the same varieties of wheat.

South Africa Buys Australian Butter

Australia has sold 1.7 million pounds of butter to South Africa. Delivery was made in two shipments, one in September and the other in October. The butter was reportedly of "choicest" quality and was sold at 47 cents c.i.f. Capetown or Durban.

Normally South Africa is a surplus butter producer, but drought this year in some of the dairy areas caused a butter shortage. Earlier in the season, it bought some New Zealand butter.

U.K. Liberalizes Trade With U.S.

Recently the United Kingdom liberalized a long list of farm products from the dollar area. Important to U.S. trade was the freeing of meat other than hams and pig meat, since this category includes canned and cooked frozen poultry for which there is a growing market in Britain.

Dried fruit was liberalized, but U.S. prices have been high because of short crops. Therefore, sales have actually decreased. Raw cotton was also included on the list, although technically there were no restrictions prior to the announcement. Cotton had been imported on open individual license for some time and licenses were freely granted. Manufactured tobacco received a sharply increased import quota, but leaf tobacco restrictions remained unchanged.

Other items freed included fresh citrus fruits other than grapefruit, fruit juices other than orange and grapefruit, and animal offals. Canned fruits and fresh apples and pears remained under license, but it is doubtful whether relaxation would have had much effect on purchases of these items this season.

Correction. October 1959 issue, p. 19, col. 1, par. 2, line 9, should read: 375 to 250; cotton from 3.32 to 2.1;

Ceylon Trades Coconut Oil For Rice From Burma

A recent Ceylon-Burma trade agreement provides for reciprocal annual purchases of 300,000 long tons of Burmese rice and 8,000 tons of Ceylonese coconut oil.

The pact is for a 4-year period beginning in 1960. At the time it was signed, a contract was concluded which set the price for Ceylon's 1960 rice quota from Burma at equivalent \$89.60 per ton. This places Ceylon in a favorable bargaining position regarding the price it will have to pay Communist China for a balance of 80,000 tons of rice remaining to be shipped in 1959 under the Ceylon-Communist China rubber-for-rice trade pact.

Other commodities may be exchanged by Ceylon and Burma on an informal basis. These will probably include Ceylonese tea and rubber and Burmese timber, "dhal" (decorticated, split, and ground pulses), and other forms of pulses.

Colombo Wheat From Canada Moving to the Far East

Canada's first sale of wheat under a \$500,000 Colombo Plan grant was shipped to Rangoon in September. Funds from the 3,600-ton shipment are to be used for Burmese economic development projects.

A tentative Colombo Plan agreement with South Vietnam provides for the sale of \$300,000 worth of wheat flour and butter for local currency. The money realized from this sale would also be used for economic development.

Sweden Raises Duties On Livestock and Meat

Sweden has raised import duties on specified livestock and meat items. Live cattle duties now stand at 6 cents per pound; whole, half, or quarter carcass beef, 10 cents; boneless beef, lamb, mutton, and horsemeat, 14 cents; cured, preserved, and certain variety meats, 15 cents.

This action was designed to forestall a possible glut in the domestic market as a result of a drought-induced increase in slaughter at home.

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Ireland's Butter Sales Take Sharp Nose Dive

Irish butter exports in the first half of 1959 dropped sharply to 2.1 million pounds from 23.0 million in the comparable period of 1958. Shipments to the United Kingdom—by far the most important market—totaled only 400,000 pounds, compared with 14.6 million in the earlier period. A 23-percent decline in creamery butter output and a 7-percent increase in domestic butter consumption greatly reduced the quantity of butter available for export.

Farm Products Included In French Liberalization

Recently France took a further step toward eliminating discrimination between the countries belonging to the Organization of European Economic Cooperation (OEEC) and the dollar area. It liberalized imports from the dollar area of all but 35 items formerly liberalized only to OEEC countries.

At the same time, France issued a list of items newly liberalized from both areas. The farm products newly liberalized include tallow, lemon and other citrus juice—except orange—(concentrated and unconcentrated

with a density not exceeding 1.33 at 15° centigrade), dried apricots, dried prunes (natural condition in sacks), and beginning January 1, 1960, variety meats.

Chile May Import More U.S. Cotton

Chile is expected to import more cotton this year because its textile situation has improved considerably. Expanded consumer purchasing power has strengthened demand for cotton goods and stocks of textiles have been worked off. Cotton mills, which have operated below full capacity in recent years, plan to step up production.

The U.S. share of the Chilean market is likely to increase substantially above 1958-59, when purchases were shifted to lower-priced Peruvian cotton. Prices of U.S. cotton are now competitive and exportable supplies of Peruvian cotton are relatively low.

Colombia Plans To Purchase Sheep From United States

Colombia's Ministry of Agriculture is considering imports of U.S. sheep to develop the domestic sheep and wool industry. It plans to buy a total

of 3,000 animals in lots of 100 ewes to each 10 rams. They would be selected from different flocks in the Corriedale, Merino, Rambouillet, and Romney Marsh breeds. This would probably be the largest shipment of live sheep the United States has ever made to a South American country.

Colombia does not produce enough wool to supply its own needs. In recent years, imports of raw wool have averaged about 2 million pounds annually—mostly from Argentina.

Iceland Exports More Lamb to United States

During the first 7 months of 1959, Iceland shipped 1.1 million pounds of lamb to the United States, compared with less than 600,000 pounds in the comparable period of 1958. Mutton exports, however, dropped from 146,000 pounds to 93,000.

In 1958, Iceland produced 152.5 million pounds of mutton and lamb. About 5 percent—7.1 million pounds—was exported. Most of 1958 exports went to the United Kingdom, but the United States bought 1.1 million pounds that year. In 1960, Iceland hopes to ship considerably larger quantities to the United States.